

NEWS IN School Health

SCHOOL HEALTH UNIT

FALL - 1997

INFECTIOUS DISEASES: THE ONGOING CHALLENGE

In 1992 the School Health Unit, Department of Public Health, published its first *News in School Health*, designed to provide updated information on school health topics. The content focused on infection control. Five years later the newsletter again addresses this important issue, an issue which continues to bring new challenges to Massachusetts schools.

Not surprisingly, infection control formed the basis of the first school health programs. In 1894 Boston established the first school health services with "medical inspections" designed to exclude children with serious communicable diseases from the schools. By 1902, Lillian Wald (public health nurse in the Henry Street Settlement House) recognized that many children were being excluded from the New York City schools for excessively long periods of time. She assigned the first school nurse there with responsibilities for health education and follow-up, successfully reducing the number and length of student exclusions.

A century later, schools continue to be concerned about infection control for three primary reasons: (1) School health education programs offer a unique opportunity to teach children how to avoid infectious diseases; (2) Because children and adolescents spend their "working days" in schools, this setting provides an important place to promote population-based immunity; and (3) The reduction in infectious diseases will have a marked effect on student attendance and ultimately on educational outcomes.

Schools and their comprehensive health education programs are a vital force in teaching children and adolescents to prevent infections. Students who learn and practice the simple technique of hand-washing have

mastered the single most effective method of infection control. An understanding of universal precautions will reduce the spread of blood-borne infections. These are just a few of the prevention messages students may incorporate as they move into adulthood.

For many decades, entry into school has marked the "safety net" for determining whether all school children have the required immunizations. More recently, with the advent of such immunizations as hepatitis B, schools have become convenient sites for implementing large immunization initiatives. Massachusetts has been a national leader in immunizing its sixth graders against hepatitis B, largely as a result of the committed efforts of the school nurses and school-based health centers, working with community agencies such as the boards of health.

As the Commonwealth moves forward in its educational initiatives under the Education Reform Act, school attendance is vital to improving student grades. Reducing absenteeism through illness prevention is a clearly understood concept. However, another consideration is the impact on administrative and staff time and attention when an infectious outbreak does occur within the school. The recent incidents of pertussis and measles in Massachusetts schools have demonstrated the disruption to the educational process and the need to increase prevention efforts.

As the next century approaches, infection control will remain a priority. Health education, immunizations, and ongoing surveillance will continue to be important strategies to maximize both our students' health and their education.

Anne H. Sheetz, R.N., M.P.H., C.N.A.A.
Director of School Health

"We believe...measures for prevention will effect infinitely more, than remedies for the cure of disease." - Report of the Sanitary Commission of Massachusetts, 1850, Lemuel Shattuck, et al.

MASSACHUSETTS DEPARTMENT OF PUBLIC HEALTH
BUREAU OF FAMILY AND COMMUNITY HEALTH

NEWS BRIEFS

STRATEGIES OR IMPLEMENTING ADOLESCENT HEPATITIS B SCHOOL-BASED IMMUNIZATIONS PROGRAMS FOR STUDENTS GRADES 7 THROUGH 12 The Joint Committee on Adolescent Hepatitis B Immunization of the Massachusetts Chapter to the American Academy of Pediatrics and the Massachusetts Immunization Partnership are joining with the Rotary Clubs of Massachusetts to encourage cities and towns to provide hepatitis B immunizations in the schools for students grades 7 through 12. Superintendents, school nurses, physicians and health coordinators will receive a letter describing how they may join in this important effort on behalf of adolescent health.

MASSACHUSETTS COMMITTEE OF SCHOOL PHYSICIANS Dr. Alan Stern, Dr. Linda Grant, and Dr. Carol Podolsky in collaboration with the Massachusetts Department of Public Health's School Health Unit, are spear-heading an effort to establish a Committee of School Physicians. The goals include (a) enhancing the involvement of physicians in school health, (b) establishing a network of physicians in Massachusetts who are providing school health services, (c) educating the physicians on the established guidelines and standards for school health programs, (d) encouraging multi-disciplinary partnerships in the provision of comprehensive school health, (e) establishing residency and medical activities in school health, and (f) identifying and showcasing "best models" of physician involvement. As a beginning step, a letter and survey will be sent to all school physicians. School physicians are encouraged to complete the survey and provide suggestions as to projects and issues specific to their roles in the schools.

RECOMMENDATIONS FOR THE SCHOOL NURSE IN ADDRESSING HIV/AIDS WITH ADOLESCENTS: The American Nurses Association has recently published these recommendations and is offering them to school nurses free of charge. To receive a copy, please write to Caty Sibble, Program Coordinator, School Health Unit, MDPH, 250 Washington Street, Boston, MA 02108-4619.

QUESTIONS ABOUT POSTURAL SCREENING REQUIREMENTS: M.G.L. Chapter 71, Section 57 requires that all children grades 5 through 9 have postural screening annually. If a parent does not want to have the screening done in the school, he/she may have the child's primary care physician (M.D.) complete it and send the results in writing to the school nurse to become part of the child's school health record.

BRIGHT SMILES, BRIGHT FUTURES: Provided free of charge as an educational service by Colgate-Palmolive, *Bright Smiles, Bright Futures* for Third Graders is currently reaching more than 100,000 classrooms and 3 million children with innovative oral health education materials. For more information on this program and/or to request Health Fair materials, please call 1-800-334-7734.

CHILDHOOD FATALITIES DECLINE YET DISPARITIES PERSIST Childhood injury fatality rates declined from 23.1 per 1000 in 1985 to 14.3 per 1000 in 1994 giving Massachusetts one of the lowest rates in the country. The number of unintentional injury fatalities among children age 19 and under dropped 53% between 1985 and 1994, largely due to the decline in motor vehicle related fatalities. Intentional injury fatalities increased in this same time interval. The number of homicides in 1994 was 1.5 times higher than in 1985. For the first time, the number of intentional injury fatalities equaled the number of motor vehicle fatalities among children and youth in 1994. These and other childhood injury trends were recently released by Massachusetts Department of Public Health's Injury Prevention and Control Program (IPCP) in a report entitled *Injury Fatalities and Hospitalizations Among Massachusetts Children and Youth, 1985-1994*. To obtain a copy of the report, call Joanne Statires of the IPCP at (617) 624-5426.

NEW NUTRITION RESOURCE FOR SCHOOLS: The Massachusetts School Nutrition Task Force has developed the *School Nutrition Resource Guide*, a compilation of in-state and national nutrition resources. It includes a listing of nutrition resources by subject. Each listing contains a brief description of the agency/program and information on available materials. It includes a contact person and/or phone number. The guide will be mailed to school health coordinators statewide at the beginning of the school year. Please contact your school health coordinator to view the guide. For information on how to get a copy, contact Maria Bettencourt at (617) 624-5440 or email the request to maria.bettencourt@state.ma.us.

SAFE SCHOOLS PROGRAM FOR GAY AND LESBIAN YOUTH: The Massachusetts chapters of PFLAG (Parents, Families and Friends of Lesbians and Gays), in conjunction with the Department of Education's Safe Schools Program, have speakers available for school and community audiences. Speakers address the impact of homophobia on youth, and the importance of making schools safe places for all students. Audiences may include students, faculty, families, human services and health care professionals, or community and religious organizations. For more information, to arrange for speakers, call (978) 582-5807 or (781) 396-1688.

**ATTENTION:
CHANGES IN MUNICIPAL MEDICAID
AFFECTING SCHOOLS**

During the next several months the Department of Medical Assistance will send letters to the local Municipal Medicaid Providers about the opportunity to amend their contracts to include certain administrative case management activities provided by such school personnel as school nurses, school physicians, therapists, social workers, special education administrators, etc. Many of these activities are currently provided in the schools and may be eligible for reimbursement through Municipal Medicaid. Letters will also be sent to superintendents, school nurses and others. Trainings for school health personnel will be scheduled during the fall. More information will be forthcoming.

**HANDWASHING--
AN OLD STANDBY PREVENTS
NEW DISEASE**

by Janine Cory, M.P.H.

Your mom was right—wash your hands! Starting or keeping this good habit will help prevent the spread of a variety of diseases. It is important to help teach children the correct way to wash their hands, too. Thorough handwashing will help keep schoolchildren from bringing home the “disease of the week.”

Good handwashing is easy to learn and do. Lather with soap (it doesn't have to be anti-bacterial) and plenty of warm, running water. Rub hands with plenty of friction for at least 30 seconds. Rinse well, and don't forget to use a paper towel to shut off the contaminated faucet handle.

Some important times to remember to wash your hands include:

- after using the bathroom
- after changing a diaper or helping a child use the bathroom (don't forget the child's hands!)
- before preparing any food
- after handling raw meats or poultry
- after touching pets, especially reptiles
- after handling garbage or other dirty items
- after sneezing or blowing your nose.

Also, remember to remind children to wash their hands:

- after using the bathroom
- after sneezing or blowing their nose
- after playing with kids or the toys of kids who may be sick
- after playing outside
- before eating
- after touching pets, especially reptiles

Good handwashing can lower the risk of getting sick from diarrhea and colds. Frequent handwashing also removes dirt and harmful lead toxins. Encourage your children to wash their hands regularly, and set a good example. It's something you can both do together to keep your family healthy.

The Massachusetts Department of Public Health has teamed up with the Massachusetts Medical Society to spread the word about handwashing. The Massachusetts Medical Society has launched a two-year campaign to promote the health benefits of proper handwashing. The multi-faceted campaign includes public service announcements, shopping bag inserts, posters displayed in restaurants, and the creation of a life-sized costume for the campaign mascot “Soapy.” Other projects under development include an informational brochure, handwashing curriculum for young children and health care workers, and story-based coloring book, a children's song encouraging handwashing, and radio spots starring sports figures.

IMMUNIZATION ISS

NEW IMMUNIZATION SCHEDULE JULY 1997

by Jean Franzini, M.S., R.N.

The July 1997 Department of Public Health Immunization Guidelines contain the most recent requirements for children to attend daycare, kindergarten, school and college, as well as the recommended immunization schedules. The guidelines are based on recommendations of the Advisory Committee on Immunization Practices (ACIP), the American Academy of Pediatrics (AAP), and the American Academy of Family Physicians (AAFP). Students who were not vaccinated at the recommended time, but are in the process of completing their immunization series, may be allowed entry into schools. Because of established scientific rationale for administration of vaccines at minimal time intervals, those students following the "catch-up schedule" are not able to receive subsequent vaccines before school starts. This would then be considered a *temporary* medical contraindication for immunization. Remember, the only valid exemptions to immunizations in Massachusetts are medical or religious exemptions.

1997 IMMUNIZATION GUIDELINES: WHAT'S NEW AND NOTEWORTHY*

The immunization schedule has been updated, as recommended by the Advisory Committee on Immunization Practices (ACIP) and the American Academy of Pediatrics (AAP).

REQUIREMENTS

Day Care: Effective August 1, 1998, 1 dose of varicella vaccine will be required for children 19 months of age or older without a history of chickenpox, who were born on or after January 1, 1997.

Kindergarten: Since September 1995, 2 doses of measles-containing vaccine for all children, and, since September 1996, 3 doses of hepatitis B vaccine for children born since January 1992.

College: 2 doses of measles-containing vaccine, *regardless* of birth date.

Note: MMR is the vaccine formulation always recommended for the 2nd dose of measles-containing vaccine.

RECOMMENDATIONS

DTaP (DIPHTHERIA/TETANUS/ ACELLULAR PERTUSSIS) VACCINE

- DTaP is now recommended for all doses of the routine series.
- Whenever feasible, the same brand of DTaP should be used for all doses of the vaccine series. If the provider does not know, or does not have available, the type of DTaP vaccine previously given, any of the licensed DTaP vaccines may be used to complete the series.
- Any licensed DTaP vaccine may be used to complete the vaccination series of children who have had one, two, three, or four doses of whole-cell DTP.
- Contraindications to DTaP are the same as those for DTP.

IPV/POLIO VACCINE

A sequential schedule of 2 doses of inactivated poliovirus vaccine (IPV) and 2 doses of OPV is recommended to reduce the risk of vaccine-associated paralytic polio (VAPP).

RECOMMENDATIONS continued

• The following schedules are all acceptable by the ACIP and the AAP, and parents and providers may choose among them:

1. IPV at 2 and 4 mos, OPV at 12-18 mos and 4-6 yrs; or

2. IPV at 2, 4, 12-18 mos, and 4-6 yrs; or

3. OPV at 2, 4, 6-18 mos, and 4-6 yrs.

• *Four* doses are needed to complete the primary series if any combination of IPV and OPV is used.

• IPV is the only polio vaccine recommended for immunocompromised persons and their household contacts.

VARICELLA VACCINE

• 1 dose for children 12-18 months of age without a reliable history of chickenpox.

• 1 dose for susceptible 11-12 year olds without a reliable history of chickenpox or vaccination.

ADOLESCENT IMMUNIZATION

An adolescent visit at 11-12 years of age, prior to 7th grade, is an opportunity to assess, and immunize if necessary, with:

• Td (tetanus and diphtheria toxoids, adult use), if at least 5 years have elapsed since last dose of DTP, DTaP, or DT.

Subsequent routine Td boosters are recommended every 10 years.

• 2nd dose of MMR.

• 3 doses of hepatitis B vaccine.

• 1 dose of varicella vaccine for those without a *reliable* history of chickenpox or vaccination.

• Pneumococcal and annual influenza vaccination, if risk factors are present.

**FOR QUESTIONS REGARDING
IMMUNIZATIONS, PLEASE CALL
(617) 983-6800 - OR THE
REGIONAL IMMUNIZATION
PROGRAM.**

FACTS ABOUT THE VARICELLA VACCINE

by Flora Sadri-Azarbayejani, M.A., M.P.H.

Varicella (chickenpox) vaccine, *Varivax* manufactured by Merck and Co. was licensed in March of 1995. It is a live attenuated viral vaccine for use in children ≥ 1 year of age. Children ≤ 12 years of age only need 1 dose of vaccine, while those ≥ 13 years of age require 2 doses administered ≥ 1 month apart.

The vaccine has proven to be 70-90% effective against infection and 95% protective against severe disease for more than 10 years. When breakthrough infections occur, varicella tends to be substantially less severe than in unvaccinated persons.

Groups Who Should Receive Varicella Vaccine.

State-supplied varicella vaccine is intended for the following groups: 1) all children 12-18 months of age, regardless of history of chickenpox. (However, immunization is not necessary for those *with reliable* histories.); 2) susceptible sixth graders (e.g., those *without a reliable* history of chickenpox or varicella vaccination), or in the case of an ungraded classroom, those 11 years of age; 3) susceptible household contacts of immunocompromised individuals.

According to the guidelines of the Advisory Committee on Immunization Practices (ACIP), there are some additional groups for whom varicella vaccine is also recommended/considered, as outlined below. However, you may not use state supplied vaccine for these groups. Varicella vaccine for the following groups **MUST BE PURCHASED DIRECTLY FROM THE MANUFACTURER**: susceptible health care workers; persons for whom varicella transmission is likely (e.g., teachers of young

children, daycare employees, residents/staff in institutional settings); persons for whom varicella transmission can occur (e.g., college students, inmates/staff in correctional institutions, military personnel); non-pregnant women of child bearing age; international travelers; other susceptible adolescents and adults.

Evaluating Varicella Susceptibility

Persons are considered susceptible if they do not have a *reliable* history of varicella. A reliable past history is one of the following: 1) physician diagnosis; 2) good parental history or 3) serologic proof of immunity. Serologic testing of children before vaccination is *not* warranted, because most children without a clinical history of varicella are susceptible and the vaccine is well tolerated in seropositive persons. Conversely, most adults who do *not* have a reliable history of varicella are *actually immune*. Therefore, serologic testing before vaccination of adult staff is likely to be cost effective.

Evaluation of Varicella-like Rash in Vaccines

1. Modified Varicella Syndrome - Varicella, also known as vaccine-modified varicella, can occur in vaccinated people, who are incompletely protected post vaccination. This form of disease is usually mild and occurs \geq 6 weeks after vaccination. Nevertheless it is transmissible to some degree, and cases should be excluded from school according to the same guidelines as unvaccinated cases of wild type disease.

2. Vaccine Associated Rash - Vaccine associated rash occurs in 1-5% of vaccinated persons. While it can appear within 6 weeks post-vaccination, it is most common 1-3 weeks after vaccination. Post-vaccination rash can be localized at the site of injection or generalized. The median number of lesions is 5 and the total number of lesions is often < 20 , compared to several hundred in

unvaccinated cases. In addition, persons with vaccine associated rashes are afebrile, have fewer vesicular lesions, and have shorter duration of illness than unvaccinated persons. Those with post vaccination rash are much less infectious than those with wild-type disease. When transmission does occur it tends to result in asymptomatic seroconversion or very mild disease in contacts, because of the attenuated vaccine strain of virus involved. *While there are no official guidelines, many experts feel it is acceptable for children with post vaccination rash to attend school, provided they are otherwise asymptomatic.* School health programs will need to develop their own policies around this issue, and nurses will need to carefully evaluate the timing of the rash, the number of lesions and the general health of the child. A rash is more likely to be due to vaccine when: 1) it occurs within 1-3 weeks post vaccination; 2) has ≤ 20 lesions; and 3) the child is afebrile and otherwise asymptomatic. A rash with these characteristics is most likely to be due to vaccine, is less infectious than wild-type disease and the child *could* attend school, if local policy permits.

A rash is more likely to be due to wild-type disease when: 1) it occurs less than one week or greater than 6 weeks post vaccination; 2) the child has ≥ 20 lesions; 3) the child is febrile or otherwise symptomatic. A rash with these characteristics is more likely to be due to wild-type disease. Staff and children with wild-type disease, including modified varicella syndrome, should be excluded until all lesions have dried and crusted, or until no new lesions appear, usually by the fifth day.

Becoming a Varicella Vaccine Provider

If you are interested in becoming a varicella vaccine provider, please contact the Massachusetts Immunization Program Vaccine-Management Unit at 617-983-6800.

**ATTENTION:
NEW VARICELLA REQUIREMENTS!**

Starting August 1, 1998, one dose of varicella vaccine, or a note signed by a physician stating that the child has a past history of chickenpox, will be required for all Massachusetts children in family and group daycare centers who are 19 months of age or older, and who were born on or after January 1, 1997. While varicella vaccine is not yet required for susceptible adolescents and children enrolled in preschool programs operated by school systems, it is *strongly* recommended.

VACCINE HANDLING AND STORAGE

Varivax is a sensitive vaccine with strict distribution, handling and storage requirements.

1. To maintain potency, one must store the vaccine frozen at an average temperature of $\leq 5^{\circ}\text{F}$ ($\leq -15^{\circ}\text{C}$).
2. Varivax should be stored in a frost-free freezer (can be the freezer of a frost-free refrigerators).
3. The freezer must have a separate insulated door; "dorm-style" refrigerators are not adequate.
4. The temperature of the vaccine should be monitored twice daily and recorded.
5. The diluent must be stored separately either at room temperature or in the refrigerator.
6. The vaccine should be reconstituted according to the directions in the package insert and only with the diluent supplied with the vaccine, which does not contain preservative or any other antiviral substances that could inactivate the vaccine virus.
7. Once reconstituted, the vaccine should be used immediately to minimize loss of potency and discarded if not used within 30 minutes after reconstitution.

**EXCLUSION GUIDELINES IN SCHOOL
SETTINGS**

By Brian Riley, M.A., M.P.H.

There are two situations in which children who are not appropriately immunized may be admitted to school: 1) a medical exemption is allowed, if a health care provider submits documentation that an immunization is medically contraindicated; and 2) a religious exemption is allowed, if a parent submits a written statement that immunizations conflict with their sincere religious beliefs (105 CMR 220.000, M.G.L. c.76, s.15 and 15c). The reporting and control of diseases identified as posing a risk to the public health is prescribed by state regulation and law. The Reportable Diseases and Isolation and Quarantine Requirements (105 CMR 300.000, and M.G.L. c.111, s.3, 6, 7, 109, 111,112) establish isolation and quarantine requirements for cases of certain diseases and their contacts in certain high risk situations, including school settings.

The laws and regulations state that unimmunized children who do not meet criteria for medical or religious exemption "shall not be admitted to school." In situations when one or more cases of disease are present in a school, all susceptibles, including those with medical or religious exemptions, are subject to exclusion as described in the Isolation and Quarantine Requirements.

The table on the next page outlines several of the more common childhood vaccine-preventable diseases identified in the Requirements that may occur in schools and the corresponding exclusion requirements.

Guidelines for Select Vaccine Preventable Diseases

Disease	Case	Symptomatic Contact	Asymptomatic Contact
Measles	Student/staff should not return until at least 4 days after rash onset. (Count the day of rash onset as day zero.)	Same as for a case. Obtain a blood sample for confirmation, drawn ≥ 3 days after rash onset. (Count the day of rash onset as day zero.)	If one case of measles: exclude susceptibles ¹ from day 5 through 18 after exposure. If multiple cases: exclude susceptibles ¹ for 14 days after the date of rash onset of the last case.
Mumps	Exclude student/staff until 9 days after onset of gland swelling. (Count the day of swelling onset as day zero.)	Same as for a case. Obtain an acute blood sample for confirmation, drawn as soon as possible after onset of symptoms, and a convalescent blood sample drawn 14 days after the acute. (Count the day of swelling onset as day zero.)	If one case of mumps: exclude susceptibles ² from day 12 through 26 after exposure. If multiple cases: susceptibles ² must be excluded for 26 days after the onset of the last case.
Rubella	Exclude student/staff for 7 days after rash onset. (Count the day of rash onset as day zero.)	Same as for a case. Obtain a blood sample for confirmation, drawn ≥ 3 days after rash onset. (Count the day of rash onset as day zero.)	If one case of rubella: exclude susceptibles ³ from day 7 through 21 after exposure to the case during his/her infectious period. If multiple cases: susceptibles ³ must be excluded for 21 days after exposure to infectious case.
Pertussis	Exclude student/staff until 3 weeks after cough onset or after completing 5 days of a 14 day course of the appropriate antibiotics. (Count the day of cough onset as day zero.)	Same as for a case. Obtain a culture if it is <2 weeks after the cough onset. Obtain an SLI serology if the patient is ≥ 11 years old and it is 2-8 weeks after the cough onset. (Count the day of cough onset as day zero.)	Do not exclude after starting appropriate antibiotics. Any susceptible ⁴ contacts not undergoing antibiotic prophylaxis must be excluded until 21 days after the onset of the last case. In addition to antibiotic prophylaxis, contacts that are <7 years of age who are under immunized should have immunization initiated or continued depending on their past history.

SCHOOL NURSES' EFFORTS RESULT IN SUCCESS

by Gail H. Chaffee, RN,
Adolescent Hepatitis B Coordinator
Massachusetts Immunization Program

The hard work of many school nurses is showing great results according to the summaries that have been sent in from schools implementing the sixth grade hepatitis B school-based program. Preliminary results from schools implementing the program indicate that over half of the students participate in the program, with 88%-100% of those students participating completing the three dose series. Many school nurses have met barriers head on and succeeded in implementing a successful program for the students.

Based on the 1996-1997 seventh grade immunization survey, 30% of seventh grade students in Massachusetts had already received three doses of hepatitis B vaccine. Remember, this voluntary program only began in November 1995. Hepatitis B immunization data was not received from 31% of the schools in Massachusetts. Various reasons were cited for the lack of data, e.g. information not included on immunization record from health care providers. New updated immunization certificates are available from the Immunization Program if you want these for your school records. Based on the number of schools participating in the program, and the number of vaccine providers immunizing this cohort, we anticipate an increase in the percent of students immunized with the hepatitis B vaccine this coming year.

With the help of community resources, at least 25 communities have successfully expanded the program this year to include hepatitis B immunization of high school students.

Beginning this fall, Rotary Clubs, the Massachusetts Chapter of American Academy of Pediatrics, the Massachusetts Immunization Action Partnership and the Massachusetts Immunization Program, along with the vaccine manufacturers, will team together to assist communities that wish to expand this initiative to older teens. Plans to launch this program include mailings to all school nurses.

If you have questions, please call Gail Chaffee, R.N., at 617 983-6800.

WINCHESTER SCHOOL-BASED HEPATITIS B IMMUNIZATION PROGRAM

by Joseph J. Tabbi, RS, CHO,
Health Director, Winchester
and
Randall W. Swartz, PhD,
Board Member, Winchester Board of Health

In 1995, the Massachusetts Department of Public Health began providing hepatitis B vaccine free of charge to all students in the sixth grade, but our Board of Health recognized the need to also include students in grades seven through twelve, who were not immunized through their private physicians. We embarked on a program to vaccinate *all students* against hepatitis B, within the school system, at a minimal fee.

Initial inquiries: SmithKline Beecham Pharmaceuticals provided the vaccine in prefilled syringes with 1" needles for less than \$9 per dose.

Coalition building and overcoming resistance to change: We approached the school administration suggesting an in-school immunization program at a fee of \$30 for the

required three dose series. The initial response was discouraging. The arguments given were: "It is impossible to do; it is too time consuming; it will not work; and it would interrupt the school curriculum." Through further discussions we enlisted the full support of the superintendent of schools, the principals, and the school nurses. Next the Board of Health strongly endorsed the entire effort.

Implementation: *Phase 1 - Education.*

The high school nurse gave lectures on hepatitis B as part of the health education curriculum covering issues on health effects, mode of transmission, and the importance of being immunized.

Parents were invited to an evening workshop. The workshop was presented by a physician expert on infectious diseases, and a representative of the MDPH was available to answer questions. Based on public discussions and news releases, information was published by the local press.

Phase 2 - Parental consent and payment.

Permission slips were mailed to parents and returned to the middle and high schools. The cost of the three dose series was paid in advance. Where necessary, the Town made the vaccine available free.

Phase 3 - Execution.

To immunize all of the students prior to the end of the school year, we used the zero/one/four month schedule. Additional mailers notified parents of the upcoming dates for second and third doses. Middle school students were called to be vaccinated by classroom, and in high school, where classroom structure is flexible, the students were called by alphabetical order. Each student was out of class approximately 20 minutes.

Results: 97% of all students who participated, completed the three dose series. Some 67% of the high school students and 69% of the middle school

students were immunized. All participants were very pleased with the results. Recognizing that some of the students may have received the vaccine privately, we consider this a real success.

Several other communities have followed the Winchester example with encouragement from us and from the State officials.

We are proud that our success has set a standard. Even with restricted budgets, community health need not be neglected. We believe that for worthy public health projects, given a strong commitment to success, all obstacles can be overcome.

**RESULTS OF THE
1996-97 IMMUNIZATION SURVEYS**

by Donna Lazorik, M.S., R.N., C.S.
Immunization Program Coordinator

Every year the Immunization Program conducts immunization surveys of all licensed group day care centers, kindergartens, seventh grades and colleges in the Commonwealth to monitor compliance with school and day care immunization requirements. We should note that this is the first year that we have surveyed for hepatitis B in kindergarten and seventh grade, and hepatitis B immunization, while recommended, is not required for seventh grade. Immunization levels among college students are not as high as those in school and day care centers. A number of colleges reported difficulties in tracking immunizations.

The results of the surveys, summarized in the tables below, indicate that immunization requirements are effective in ensuring that children in licensed day care and school are well-protected against vaccine-preventable diseases. These requirements, and their enforcement, have resulted in an absence of outbreaks of disease in these settings.

1996-1997
Immunization Survey of Children
Enrolled in Kindergarten and Attending Licensed Group Day Care

	No. Enrolled	DTP ¹	Polio ²	MMR ³	Hib ⁴	HepB ⁵
Kindergarten	86,896	97%	98%	98%	NA	33%
Day Care	110,221	98%	98%	98%	96%	82%

Seventh Grade MMR Survey

No. Enrolled	1 Dose MMR	2 Doses Measles	HepB ⁵
78,598	99%	96%	30%

Immunization Survey of College Students

	No. of Students	1 Dose MMR	2 Doses Measles	Td ⁶
Undergraduate	183,664	94%	91%	92%
Graduate	31,707	90%	83%	89%
Health Science	24,318	92%	90%	94%
TOTAL	239,689	93%	90%	92%

¹DTP : Diphtheria, tetanus, pertussis vaccine, 4 doses

²Polio vaccine : 3 doses

³MMR: Measles, mumps, rubella vaccine, 1 dose

⁴Hib: *Haemophilus influenzae* type b vaccine, ≥ 3 doses

⁵HepB: hepatitis B vaccine, 3 doses

⁶Td: Tetanus, diphtheria toxoid

**MASSACHUSETTS IMMUNIZATION
INFORMATION SYSTEM
BEGINS PILOT**

by Robert Rosofsky, Director
Massachusetts Immunization Information System

Despite the success of immunizations in preventing morbidity from vaccine-preventable diseases, many children across the state are underimmunized. Providers have indicated that a lack of immunization records and uncertain immunization histories are major barriers to complete immunization. To help improve these rates, the Department of Public Health has begun the development of the Massachusetts Immunization Information System (MIIS) to track immunizations for the entire childhood population in the state. Starting with a cohort of births in 1997, the MIIS will obtain immunization records directly from health care providers.

The information contained in the database is protected under Massachusetts law, and consent from parents and legal guardians is required to allow sharing of information between and among health care providers and other specified data users. This consent will be sought at prenatal care sites, through the birth registration process, in a post-natal mailing to parents of newborns, and by immunization providers themselves. Full confidentiality of data will be maintained through rigid security systems and protocols.

The information will eventually be made available to school health personnel for verifying compliance with school entrance immunization requirements. It is expected that this will reduce the need for numerous inquiries of parents and health care providers.

A one-year pilot of the MIIS is now underway in Cambridge, Chelsea and Somerville, which includes approximately 25 provider sites; three sites have been enrolled and others will be enrolled over the next few months.

Statewide implementation is expected to begin sometime in 1998, with virtually all providers in the state utilizing the system by about 2001. Since the MIIS is starting with a recent birth cohort for only 3 communities, information will not begin to be valuable for some school districts until the year 2002.

For more information contact Robert Rosofsky, MIIS Director, by phone 617-983-6836; FAX 617-983-6926; or email at Robert.Rosofsky@state.ma.us. You can also download a copy of the MIIS brochure from the Internet's World Wide Web at www.state.ma.us/dph/pubstats.htm.

**UPDATES ON COMMON
INFECTIOUS DISEASES**

**UNDERSTANDING CONJUNCTIVITIS
("pink eye")**

by Nancy Venato and Laura Riedinger

The eye is constantly exposed to many germs, dirt and other irritants, some of which can cause eye infections. The most common eye infection in the United States is called "conjunctivitis". Cases may vary from a mild redness with watery eyes to serious infections where vision is impaired or even damaged. Conjunctivitis is an inflammation of the conjunctiva, the clear mucous membrane that covers the white part of the eyeball and the inside of the eyelids. Signs of conjunctivitis are red and irritated eyes. Anyone can get conjunctivitis since it can be highly contagious. The germs causing conjunctivitis spread easily throughout a family or classroom in a matter of days. Germs travel from one person's hands, towels, or linens to the next person's. When that person touches his face or eyes, the infection can be transferred.

How Can Infectious Conjunctivitis Be Kept From Spreading? Avoid touching or rubbing the infected eye(s). Wash hands frequently with soap throughout the day. Use paper towels instead of washcloths or use cloth towels and linens that you have washed in a hot water laundry cycle. Do not use contact lenses or eye makeup until your eye is totally healed. To avoid spreading infectious types of conjunctivitis, keep children or adults home from school or work as directed by your eye care professional.

If you would like more information about how conjunctivitis is treated, the different types of conjunctivitis, or to receive a free "Understanding Conjunctivitis" brochure, please contact Prevent Blindness America at 1-800-331-2020.

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HEPATITIS A

by Janine Cory, M.P.H.

Hepatitis A is a highly contagious viral disease that affects the liver and can lead to varying degrees of illness. Symptoms include fever, lack of appetite, abdominal discomfort, diarrhea, dark urine and jaundice. Hepatitis A symptoms commonly last for about 3 to 4 weeks, and some people become so sick that they require hospitalization. If you or your child have any of these symptoms, see your doctor or health care provider right away.

Hepatitis A virus (HAV) is passed through the stool (feces) of an infected person. It is usually spread by person to person contact, although about 3-8% of cases since 1983 have been associated with contaminated food or water. A diagnosis of hepatitis A in a food worker can be a worrisome and disruptive event. If a person works in a restaurant or other food handling job during his or her infectious period, it is possible that contaminated food could have been served to the public. The board of health and state department of public health may then decide to

offer people eating or working at the restaurant immune globulin (IG) injections. Public health officials make their decision based upon particular circumstances, such as when the food worker was infectious, whether ready-to-eat food was handled, and the food worker's personal level of hygiene.

Good hygiene is the key to stopping the spread of Hepatitis A. People who work as food handlers should be very careful about handwashing (see the article on handwashing for tips). If you think you or your child has been exposed to this virus, see your doctor or health care provider.

WHAT IS MENINGITIS?

by Janine Cory, M.P.H.

Meningitis is an infection of the lining of the brain (called "meninges") or spinal cord. Meningitis symptoms, which may appear suddenly, often include high fever, severe and long-lasting headaches, stiff neck, nausea, and vomiting. If you or your child has any of these symptoms, see a doctor or health care provider right away.

You may have noticed that meningitis cases have been in the news a lot this past year. This might make you think that there have been more cases during this past year than in others, but the number of cases in Massachusetts for this year and last year are about the average of what the Massachusetts Department of Public Health usually expects.

Meningitis can be caused by many different types of bacteria (germs). *Haemophilus influenzae type b* used to be the most common cause of meningitis in children under 4 years old, but the use of the Hib vaccine has successfully kept that type of meningitis rare these days.

Bacteria called *Neisseria meningitidis* can also cause meningitis. This type of bacteria is spread through close contact with saliva (spit), like kissing or sharing a water bottle. A lot of people carry these bacteria in their throats and do not get sick. Unfortunately, some people do seem to get very sick from those same germs. When someone has meningitis from this bacteria, the Department of Public Health will ask people in close contact with the sick person to get antibiotics to protect themselves.

Viruses can also cause meningitis. These viruses can be spread through sneezing and coughing. These viruses can also be shed in the feces, so people who don't wash their hands may end up with the germs on their hands. People can protect themselves and others by washing their hands often, especially after going to the bathroom, sneezing, coughing, or wiping their noses. Antibiotics are not useful to treat or prevent meningitis or other infections when they are caused by a virus.

There is a vaccine for *Neisseria meningitidis*, but this shot is not given as part of routine vaccinations. The number of people in this country who would get meningitis from *Neisseria* is too low to make the vaccine worthwhile. Plus, it does not protect the person for the rest of his/her life--only for a short time.

If a child in your son or daughter's school has meningitis, your school nurse, local board of health, and the Massachusetts Department of Public Health will all be working together to make sure that any close contacts of the sick child get the proper treatment that they need. If you get a letter from your child's school, read it closely to keep up to date with what is going on. Keep in mind that officials will be working very hard to make sure that those children and parents at risk are protected.

PERTUSSIS IN MASSACHUSETTS SCHOOLS

by Katherine Yih, PhD, MPH,
Epidemiology Coordinator for Vaccine-Preventable Diseases,
Massachusetts Department of Public Health

Reported cases of pertussis in Massachusetts reached 1,233 in 1996. While this may not look impressive compared with the pre-vaccine era (the number peaked at 13,333 in 1937), it represents a 2.5-fold increase over the total cases reported in 1995 and is the highest number to be reported in the state since 1958. Two basic factors appear to be contributing to the observed increase: (1) a true increase in disease incidence and (2) an increase in detection and reporting of disease by better diagnosis and surveillance.

Adolescents and adults are both experiencing a rise in incidence, while the incidence in infants and children aged one-to-ten has remained steady since the early 1980s. In 1994, 1995, and 1996, 80% of total reported cases occurred in the ≥ 11 age range (Grade 6 and up).

Of the 19 pertussis outbreaks in 1996, 17 occurred in high schools or middle schools, possibly reflecting both increased surveillance by school health officials and increased transmission. There are several reasons we are seeing many cases of pertussis in middle school, junior high school, and high school students:

- 1) Waning immunity—protection from vaccine decreases after the last dose of DTP, which is usually given at kindergarten entry.
- 2) School health-care personnel are increasingly aware of pertussis and able to do careful surveillance, identifying cases that might otherwise be overlooked.
- 3) Massachusetts health care providers are becoming more experienced at diagnosing pertussis in adolescents.

- 4) The serologic test available at the State Lab (SLI) since 1987 is helpful in diagnosing pertussis in people 11 years old and older and allows detection of many cases that would otherwise be missed.
- 5) It also seems likely that disease transmission is facilitated in schools by prolonged contact among the students and practices such as group sports and sharing water bottles.

In the event of a case or an outbreak, school health officials should consult the Massachusetts Department of Public Health's *Guidelines for the Control of Vaccine-Preventable Diseases* (1993), and the chapter on infectious diseases in the *Comprehensive School Health Manual*. In addition, you should consult with an immunization epidemiologist at the Massachusetts Immunization Program (MIP) at (617-983-6800). Control measures include the following:

- Identify individuals and groups with significant contact with the case, including:
 - People with direct, face-to-face contact—regardless of number of hours per week spent together (e.g. girlfriend/boyfriend, other close friends, sports teammates, study partners, lunch partners, health care personnel, contacts, etc.). This includes but is not limited to those with direct contact with saliva and respiratory secretions.
 - Those sharing indoor airspace with the case for at least 10 hours per week (this has been revised since 1993 *Guidelines*) (e.g. children who stay in same classroom for most of day, students who share classes with case for ≥ 10 hrs./wk., bus/carpools contacts, members of extracurricular activity groups, household contacts, etc.). Less exposure may be significant (see further for high-risk contacts).
- Identify individuals at high risk for pertussis (e.g. infants, unimmunized young children, immunocompromised individuals, pregnant women, etc.). Note that special needs

classes may consist of higher proportions of unimmunized or immunocompromised students.

- Ensure that case and significant contacts (even if asymptomatic) are placed on appropriate antibiotics for a full 14 days.
- Conduct surveillance for two incubation periods (42 days) for cough illness (particularly cough lasting at least 1 week) among close contacts and other students and staff. Ask students whether they have a cough and when it started, to describe their cough and other symptoms, and whether there are others in the household with cough. The MDPH provides pertussis surveillance log sheets and summary sheets to keep track of this information.
- Refer symptomatic individuals for diagnostic testing (less important if there is an outbreak with at least one culture-confirmed case underway). Use culture if within 2 weeks of cough onset; use State Lab serology if 2-8 weeks after cough onset and individual is ≥ 11 years old.
- Send letters to parents, staff, close contacts, and health-care providers to inform them of the case(s) at the school, symptoms to watch for, recommendations about diagnostic testing and prophylaxis.
- Exclude cases and contacts from school in accordance with isolation and quarantine regulations:
 - Confirmed case: Exclude through first 5 days of the 14-day course of appropriate antibiotics or, if not treated, for 3 weeks after cough onset.
 - Symptomatic contact: Same as above—exclude through first 5 days of the 14-day course of appropriate antibiotics or, if not treated, for 3 weeks after cough onset.
 - Asymptomatic individuals with significant contact: Do not exclude if s/he has started appropriate antibiotics, unless symptoms occur. If s/he becomes symptomatic, s/he should be treated as a case and excluded for first 5 days of the 14-day course of appropriate antibiotics. If s/he refuses antibiotics, exclude for 21 days after last

exposure or 21 days after onset of last case.

- Notify your local Board of Health (BOH) and an epidemiologist at the MIP (617-983-6800).

MIP epidemiologists and in some cases local boards of health will provide significant help with case investigation and outbreak control, interviewing patients or their parents to determine transmission settings and close contacts, following up directly with these contacts, writing alert letters, and referring symptomatics for diagnostic testing. The dedication and efforts of school health personnel are essential to limit the spread of pertussis. Please let us know how MIP staff can continue to assist you in your efforts by contacting us at the above cited numbers.

FALL WORKSHOPS: INFECTIOUS DISEASE CONTROL

Workshops through the School Health Institute will again be presented in October and November at six sites across the state. Check the U.Mass/Simmons School Health Institute brochure for the dates. Topics include adolescent immunizations, updates on implementing a school-based hepatitis B 6th grade initiative, and expanding the program to high schools through community and Rotary efforts. Also featured will be 1) school outbreaks of pertussis and measles, including control measures and exclusions during an outbreak, 2) issues relating to meningitis, chickenpox, and group A streptococcal infection, and 3) School Regulations - "What's New and What's on the Horizon."

SCHOOL-BASED HEALTH CENTER NEWS

RECENT NATIONAL ASSEMBLY CONFERENCE

The Third Annual Conference of the National

Assembly of School-Based Health Centers (SBHCs) was held in Boston on June 29-July 1, 1997. Congratulations to the following school-based health center staff and their colleagues and the Department of Public Health staff who presented workshops and poster sessions: Carolyn Conte, Linda Corinne, Anne DeMatteis, Jo-Anne Dillman, Barbara Farrel, Gail Gall, Karen Hacker, Richard Inman, Margaret Mandosa, Anne Sheetz, Howard Saxner. Carmen Calderon and Leslie Mandel and the staff from the Boston High School-Based Health Center hosted a tour and presentation at their Center.

We also want to extend a special congratulations to Dr. Karen Hacker, Director of Adolescent and School Services, Boston Public Health Commission. Karen is the current President of the National Assembly.

Also of note: The National Assembly presented an award to the Department of Public Health for "outstanding and dedicated service in the field of school-based health care." Assistant Commissioner Deborah Klein Walker accepted the award for the department at the opening session; she thanked the staff in the school health unit and all school-based health centers for their excellent work.

For more information on the National Assembly on School Based Health Care, you may contact them at 703/556-0411. The address is 6728 Old McLean Village Drive, McLean, Virginia 22101.

SBHC BROCHURE

We are pleased to announce the availability of a brochure on school-based health centers in Massachusetts. This recently published brochure provides information about school-based health centers as centers that create opportunities to improve our children's health and well-being. We would be happy to provide copies for distribution to schools, parents, local and state leaders, community groups, health care agencies and providers,

and others interested in learning about school-based health centers. If you would like copies of the brochure, please call Anne DeMatteis at 617/624-5473.

SBHC COALITION MEETING

The first meeting of the Coalition is tentatively scheduled for Thursday, September 25, 1997. The meeting schedule for the 97/98 school year will be announced at a later date.

SCHOOL EMERGENCY CARE PLANNING

COUNCIL: The Department of Public Health, led by the Emergency Medical Services for Children Project is currently designing a *Draft* for standards of emergency preparedness in the schools. Representatives from the School Health Unit and Emergency Medical Services met with more than 50 school nurses, school-based health center leaders, administrators and emergency medical responders on May 28, 1997 to begin to collaborate and define goals. Interested school staff and community leaders are welcomed to participate in future planning meetings. Please contact Jonah Goldsmith, Project Assistant at (617) 624-5430 for additional information.

IMPORTANT UPDATES

CHILDREN'S MEDICAL SECURITY PLAN

by Dana McCants
and
John M. Stewart

School nurses have been instrumental in helping many children join the Children's Medical Security Plan (CMSP). School nurses not only provide information about CMSP but they help parents and children to enroll. Due to your efforts, over 35,000 children are now being served by CMSP.

CMSP is a free or low-cost health insurance plan for uninsured children in Massachusetts.

Frequently school nurses call the Customer Service Center (at 1-800-909-2677) or the Department of Public Health with ways to improve the program and to comment on the benefit package. The feedback has been terrific and taken very seriously! Based on your suggestions, the following enhancements were made to the program on July 1, 1997:

- Our new PharmacyAccess program allows families to get their child(ren)'s prescription drugs quickly, affordably, and conveniently. Every member receives a CMSP PharmacyAccess card. Participating pharmacies will collect a \$3 or \$4 co-payment for each prescription drug when shown the CMSP PharmacyAccess card. The pharmacy bills CMSP directly for the cost of the prescription. CMSP has a prescription drug benefit of \$100 for each child per benefit year. Families can call the Pharmacy Locator at 1-800-822-6167 to find a pharmacy close to them.
- The \$200 Durable Medical Equipment (DME) benefit can be used to purchase eyeglasses, or to purchase, rent, or repair hearing aids. This DME benefit is limited to \$200 per benefit year per child. The benefit year begins July 1, 1997.
- Families will be reimbursed for blood glucose monitoring strips. For more information, call 1-800-909-2677.
- CMSP will pay for medically necessary eye exams including refraction, testing for eyeglasses, and injury to or disease of the eye.
- Families can enroll children in CMSP while waiting for MassHealth to process their Member Benefit Request (MBR or application). CMSP will no longer hold the

enrollment while the MassHealth Enrollment Center determines eligibility. All parents and children eligible for MassHealth will be encouraged to complete the MBR to enroll in MassHealth.

- Two recent paycheck stubs will be accepted to verify current income.
- Fact sheets are available in the following languages: English, Spanish, Khmer, Vietnamese, Cantonese, Russian, French and Portuguese.
- Right now, Customer Service Representatives can assist English, Portuguese, Spanish, Russian and Italian-speaking callers, and use the AT&T Language line for all other callers.

Many families in Massachusetts do not qualify for public assistance and can not afford private health insurance. CMSP provides health coverage that fits a family's budget. For more information or for immediate enrollment, call the Children's Medical Security Plan at 1-800-909-CMSP (2677).

**FREE MATERIALS ON BIKE,
PEDESTRIAN AND
INLINE SKATING AVAILABLE**

by Diane Butkus

New traffic safety materials are available to school nurses, teachers, safety advocates and others interested in promoting child and adult pedestrian, bicycle and inline skating safety. Funded by the Governor's Highway Safety Bureau and produced by Ride and Roll Safely, Inc., the materials include a guide for safety advocates/educators and handouts and posters for students and adults. One copy of the *Pedestrian, Bicycle and Inline Skating*

Program Guide will be sent to each principal; school staff may choose to either share this copy or request their own. The guide includes a "cookbook" of ideas for starting a school/community safety program, a sampling of model bicycle, pedestrian and inline skating safety programs within Massachusetts, listings of local and national safety resources and reproducible handouts.

Also available in bulk quantities are 8 1/2" by 3" safety cards titled *Bike Smart, Walk Alert* and *Skate Safe*; which may be requested in whatever number can be reasonably utilized within the next three months. (Cards are bundled by the hundred.) Two posters will also be available in limited numbers - *Make Your Helmet Fit* (appropriate for students and adults) and *Share The Roads* (designed for adults).

Materials are ideal for classroom use, family safety programs and hallway/health fair displays and are a great complement to any Child Health Month and Brain Injury Awareness Month activities being planned for October.

Requests for materials can be made to Project Coordinator Olga Guttag via email; her address is olga@oregano.lcs.mit or via fax @ (617) 862-0171. Requests can be made for a three month supply of materials; Olga will fill the requests as completely as supplies allow. Requests can also be mailed to Ride and Roll Safely, Inc., 273 Emerson Road, Lexington, MA. 02173.

All orders by mail should include separate self-addressed mailing labels for posters and cards/guide. (Include additional labels if order is very large.) If you have additional questions about traffic safety or childhood injury prevention, please call Diane Butkus at the Injury Prevention and Control Program at the Massachusetts Department of Public Health at (617) 624-5428.

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